

H. S. John.

Rhodora

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CONTENTS:

Edward Lothrop Rand. <i>B. L. Robinson</i>	17
The White Pine in middle Tennessee. <i>H. K. Svenson</i>	27
The Name <i>Sisymbrium</i> . <i>K. K. Mackenzie</i>	28
Two new <i>Epilobiums</i> of eastern America. <i>M. L. Fernald</i>	32
Records of <i>Bidens frondosa</i> var. <i>anomala</i> . <i>S. F. Blake</i>	34
Third Edition of Grout's Mosses with a Hand-Lens (book notice)	35

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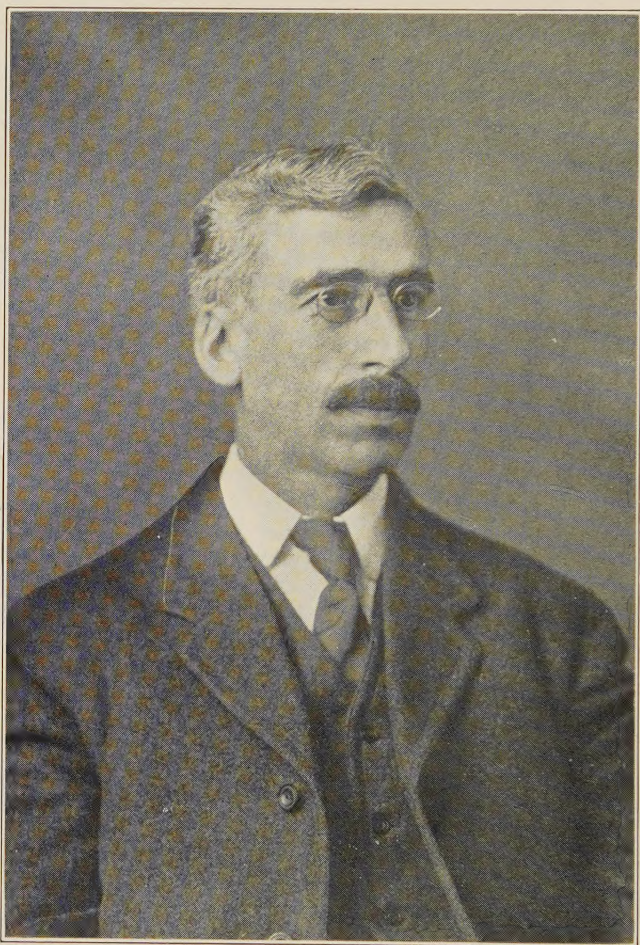
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Sincerely yours
Edward L. Rand

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EDWARD LOTHROP RAND.¹

B. L. ROBINSON.

(With portrait.)

A RECREATIVE interest in science brings its devotee into many new relations. It enriches life, diversifies activities, develops unsuspected faculties, and is apt greatly to extend personal acquaintance. The direction of such a hobby may be decided by some special opportunity, by environment, or even by accident; but its development will be individual and determined by personality. Some persons are attracted by concrete facts and become primarily observers. Others get pleasure in records and are moved to set down descriptive memoranda regarding objects and phenomena. On the other hand there are those who find facts interesting only as they can be correlated, interpreted, and made the basis of theory or generalization. Even more frequently the amateur possesses the instinct of acquisition, forms collections and tends to immerse himself in the preparation, mounting, labelling and classification of specimens. Some revel in field-work, exploration, and out-of-door observation. Others derive much of their pleasure from the literature of their chosen subject; they build up libraries bearing upon it, and become discriminating in the matter of editions and critical of publications. Finally, there is a far more human approach to science, namely the impulse which leads its possessor into cordial relations with his fellow workers and which stirs his interest in their traits as well as their activities. Those gifted with this type of interest have an important function. They are exceedingly helpful to science. It is they who form clubs

¹ A memorial address delivered before the New England Botanical Club Feb. 6, 1925.

and associations. It is they who correspond widely. It is they who are apt to be keen about the history of their subject and help much in its record and preservation. They cheer and encourage and through them much that would otherwise be dry routine and detail becomes humanly attractive because viewed as the work of human beings with individual characteristics and the peculiarities of distinct personality. Very notable in this valuable phase of scientific interest was our late secretary.

He was, it is true, himself an acute observer. He was an indefatigable collector. He was also critical in the acquisition and interpretation of scientific literature; but his keenest interest, at least in the last twenty-five years of his life, was in the human side of science.

Edward Lothrop Rand was born in Dedham, Massachusetts, August 22, 1859, the son of Edward Sprague and Jennie Augusta (Lathrop) Rand. After preparation at the Hopkinson School in Boston, he entered Harvard College in 1877. His first serious efforts to acquire a knowledge of plants appear to have taken place in the summer of 1880 during the vacation between his junior and senior years. Of this summer he was able to spend a part on Mt. Desert Island in exceptionally stimulating companionship and under conditions well nigh ideal.

He was one of a group of Harvard students who camped on Somes Sound. They were much alive to the joys of woodcraft, of boating, fishing, of mountain-tramping, and were keen to perfect themselves in the technique of sailing and of camping. Mt. Desert forty-five years ago seemed much more remote than it does today. Its summer population was relatively sparse. There were still considerable tracts of land sufficiently wild to stimulate the spirit of adventure and exploration. This group of young men formed themselves into an association which they called the Champlain Society, after Samuel de Champlain, the voyager who discovered and named Mt. Desert.

The organization seems at no time to have been very large. It included some twenty, perhaps twenty-five members, but owing to the scattered periods of their outings and limited camping equipment it was rare for more than ten or a dozen to be in camp at any one time. It is clear that these young men were there primarily for recreation and were wholesomely successful in getting it, but they seem early to have grasped the idea that the pleasures of a summer outing can be much increased by an intermingling of serious purposes.

They were fresh from their college studies and they determined to accomplish a creditable amount of field work in various natural sciences. These were discussed and volunteers were called for to undertake special interests. Among the subjects selected were ornithology, botany, entomology, geology and meteorology.

Among the members of this Champlain Society were Charles and Samuel A. Eliot, sons of President Eliot of Harvard University, who was himself at that period a summer resident of Northeast Harbor. Other members were Benjamin Bates, Henry W. Bliss, Walter L. Burrage, William H. and G. B. Dunbar, Morris Earle, John McGaw Foster, Robert W. Greenleaf, Henry Champion Jones, William Coolidge Lane, Ernest Lovering, John Prentiss, Edward Lothrop and Henry L. Rand, Henry M. Spelman, Roland Thaxter, John L. and Julius Wakefield, William L. Worcester, and Robert Worthington. As these names have been derived chiefly from the botanical records it is probable that the list is by no means complete.

Few enthusiasms are more keenly pleasurable than those of observant persons who set themselves the task of discovering and recording the flora or fauna of a region new to their acquaintance. Every member of our own Club must at times have experienced this joy as on some summer outing he has attempted to list in a locality new to him all the trees, all the ferns, orchids, mosses or possibly all the flowering plants. To anyone who has enjoyed this particular zest it will be easy to understand the enthusiasm of this group of young men as they entered upon their exploration of the diversified and picturesque island of Mt. Desert.

Happily, they kept, at least regarding their botanical activities, admirable records from the outset. The work of each year from 1880 to 1888 was made the subject of a formidable quarto brochure written out in long hand. These reports form human documents of no small interest.

They show ample evidence of boyish exuberance. They are decorated with sketches of camp or yacht ensigns, and are embellished with poems. The first list of plants covered those observed and identified in 1880. It dealt almost exclusively with the larger-flowered phanerogams and a few of the more readily recognized ferns. Even the trees were not attempted to any great extent, and the grasses and sedges were frankly omitted. The entire number of species was but 170. The nomenclature is that of the then current

fifth edition of Gray's Manual. Authorities were not thought needful and many of the names are those which have long passed into the limbo of synonymy, though some of them, such as *Thalictrum Cornuti*, *Anemone nemorosa* and *Nabalus alba* will still linger in the recollections of the older members of our Club.

This first list appears to have been drawn up by Mr. W. H. Dunbar, though much of the report was contributed by Mr. Rand and it was he who prepared the chief matter of all the succeeding botanical reports. The second already shows marked improvement, though still diffident and amateurish. The number of plants was increased to 372. There was greater care. Authorities are appended to all the scientific names. Ten grasses and six sedges are included, and a special list of trees and shrubs is added, together with a very solemn essay on the value of forests and the importance of their conservation.

The Champlain Society sometimes held meetings in the winter. These were under the leadership of Charles Eliot and chiefly at his rooms. It was doubtless on these occasions that the reports were read. At these meetings attention was also given to the history and traditions of Mt. Desert, a subject in which Mr. Charles Eliot was particularly interested.

About this time Mr. Rand spent parts of three or four summers at a fishing camp on Lake Molechunkamunk with his classmates John W. Suter and Ernest Lovering. These trips to the Rangeley Lake region probably continued from 1878 to 1881. The camp was situated just below Upper Dam and from this centre the young men made many excursions in different directions. From Mr. Rand's notes it seems clear that the chief botanical work undertaken by them in this region was accomplished in September 1880, in which Mt. Aziscoos was climbed and some 160 species were listed, of which, on account of lateness in the season, many had to be identified from fruiting specimens.

Some spring trips to Mt. Desert were made by Messrs. Rand and Lane to ascertain and collect the early-flowered plants.

In the third botanical report, covering work done in 1882, the so-called "grand total" was brought up to 440. From this time on it is clear that progress was becoming more difficult. The plants of easy access and ready identification had been largely listed. Additions had to be sought among rarer species and in groups of greater technicality.

In the fourth report the number of species was advanced to 492, including 53 grasses, sedges and rushes listed by Robert Greenleaf and a small beginning in the record of the mosses by Walter L. Burrage.

This may be regarded as the culminating achievement of the Champlain Society. No such group of young men, however congenial, could hold together during the strenuous period when they were just entering their professions or getting a start in serious business activities. It was no longer possible for them to arrange coincident vacations. Fewer and fewer could get to the camp even for a short outing, and those who did had lost something of their earlier enthusiasm.

We find the report for 1884 a bit mournful and such frank expressions as the following creep in: "as far as scientific work was concerned the expedition was an absolute failure. Nobody did any work except Messrs. Wakefield, Burrage and Rand of the Botanical Department, and their work was not very successful." One member proclaimed that he "would do no work during his vacation" and is stated to have remained "most faithful to his resolution."

Nevertheless, the reports were continued up to 1888 though they drop considerably in volume and the additions to that closely watched "grand total" become fewer and fewer.

However, as his associates in the Champlain Society gradually dispersed, Mr. Rand had the great good fortune to meet with a most admirable collaborator in Mr. John Howard Redfield of Philadelphia, an accomplished botanist, also a summer resident of Mt. Desert, who had himself been observing, collecting and recording its plants. Mr. Redfield, already elderly, generously placed his data at the service of the younger man and was able to give him much encouragement and aid. He was a man of scientific experience and a personal friend of Dr. Asa Gray. He had wide acquaintance among botanical specialists and it was probably through his influence that the later reports entered a new phase in the work, namely that of verification. This was accomplished by the reference of material to specialists. The sedges and Rubi were sent to Prof. L. H. Bailey. The name of Prof. F. Lamson Scribner appears in connection with the grass identifications. Prof. T. C. Porter helped about the asters and golden-rods. Mr. M. S. Bebb was deferred to about the willows, and Mr. G. E. Davenport regarding the ferns. Dr. T. F. Allen named the Characeae and Dr. Morong verified the pondweeds. Dr. N. L.

Britton was consulted and gave aid, Mr. F. S. Collins identified some marine algae. The hepatics were named by Prof. L. M. Underwood, some of the mosses by Prof. C. R. Barnes and others by Mrs. Britton; while the Sphagna were sent to Mr. Edwin Faxon and by him referred to Dr. Carl Warnstorf. Dr. J. W. Eckfeldt and Miss Clara E. Cummings furnished information about the lichens, and Mr. Walter Deane was consulted and his aid is stated to have been invaluable.

The collections of previous years were re-examined and disclosed unsuspected species of a technical nature. In 1888 the whole work was summarized and recorded in a manifolded catalogue which was given a certain publication by its distribution to the collaborators and to several botanical establishments and libraries. The purpose of this preliminary publication was to give a convenient checking list for further work. In the years 1889 to 1891 four supplements to this list were similarly manifolded and distributed.

In 1894, after repeated revisions, much emendation, and most conscientious proof-reading, Rand and Redfield's Flora of Mt. Desert appeared. For its epoch it was an exceptionally excellent local flora, the result of fourteen years of earnest endeavor and well-knit co-operation. It may be placed in the same class as Dame and Collins's Flora of Middlesex County and the scholarly Cayuga Flora of W. R. Dudley. Exceedingly few American floras have attempted the treatment of the thallophytes and bryophytes in conjunction with the vascular plants, and this has been rare for insular floras of any part of the world.

It has seemed worth while to trace the evolution of this work from its inception in the youthful activities of the Champlain Society to its publication as a finished piece of scientific record. In several respects the story is illuminating. It shows an extraordinary continuity of purpose. It gives a striking illustration of carefully matured and highly creditable work accomplished by an amateur in scattered intervals of limited leisure. It wonderfully explains the training which Mr. Rand brought to his later work as secretary of our Club, for it makes clear how he had personally acquired experience in collecting, in floristic record, in correlating the results of co-operative work, and finally how in the preparation of his Flora he had acquired extended acquaintance with contemporary specialists and had learned how to value their aid. It had also given him practice in seeing

technical matter carefully through press. Indeed, is it possible to think of a more favorable preparation for the duties which he was in 1895 called upon to assume?

By those, like ourselves, who saw Mr. Rand in his botanical activities, it must be remembered that these constituted merely an avocation, that he was primarily engaged in other duties, that he had an exacting profession. After taking his A.B. in Harvard College in 1881, with a scholarly rank which brought him Phi Beta Kappa honours, he continued his studies in the Harvard Law School and received his LL.B. in 1884 as well as his A.M. from Harvard College. Admitted to the Massachusetts bar in 1885, he entered the practice of the law. For many years he had his office in the Exchange Building—at first on the seventh, later on the tenth floor—in the very heart of Boston's financial district.

In his profession he was highly regarded and is believed to have had talents which would have carried him far had he not preferred a very quiet type of independent practice to association in any of the prominent partnerships, which would have entailed greater stress, with presumably less choice in the direction of his activities and probably less leisure for his avocations.

He was diligent in his work and became specially known as a skillful conveyancer, whose examination of titles commanded high respect and was felt to be of exemplary thoroughness. In this capacity he was one of the lawyers retained in the important legislative case of the Massachusetts Institute of Technology regarding the restrictions of its Boston real estate holdings. He also had considerable practice in wills and probate law and is believed to have been very generous of his time in the legal assistance of many worthy but indigent clients. Rarely, if ever, did he accept court practice. He seemed to be happy in his work and it was often continued far into the night.

His opportunities for botany were restricted to Sundays, holidays, occasional evenings, and his summer outings. These last were with great fidelity spent on Mt. Desert, in his later years at Seal Harbor. There he became one of the best known and most beloved members of the summer colony and took an effective part in the activities of the Village Improvement Society, serving repeatedly upon its committees. He devoted much care to the preparation of what is by all odds the best map of the Island, a time-consuming enterprise of no small magnitude. Fond of boating, he cared little for sailing, but

was a capital tramper, extraordinarily observant, always interesting and interested.

He was one of the most earnest and enthusiastic of the small group of gentlemen of Boston and its suburbs who in the autumn of 1895 met from time to time informally to consider the founding of a botanical club which should include both professionals and amateurs. When in December of the same year, as the outcome of these efforts, the New England Botanical Club was formed, it was he who was chosen its Corresponding Secretary.

Thereafter, for many years, he never missed a meeting either of the Club or of its Council. He personally knew every member—knew them in fact better than they realized. He was so quiet that only his intimate friends perceived how close was his observation of people as well as things. However, his judgment of their characters was kindly rather than critical. He was gifted with a fine sense of humor and though a very silent guest was apt in the course of general conversation to make from time to time whimsical observations which were the more amusing because unexpected.

During the early years of the Club, Mr. Rand was always ready to join in its field-work, if this could be arranged on holidays or at week-ends. In this way he collected at many points within thirty or forty miles of Boston. Longer excursions were not frequent in those motorless days. However, he made several short visits to the Monadnock region, with a large vasculum as an important part of his baggage. There he collected diligently in Jaffrey, West Rindge, Fitzwilliam, Troy, Dublin and Peterboro. He carefully explored the upper parts of the Contookook River and is one of the few botanists who have ascended the broken slopes of Little Monadnock and the ledges on the south side of Gap Mountain. That his holiday gatherings in this region have proved scientifically useful is shown by the fact that some of them have from time to time been cited in RHODORA.

When in the autumn of 1898 our journal was in contemplation he was one of the earliest to regard the plan as feasible and one of the most active in soliciting the several hundred advance subscriptions needful to make it practicable. When the RHODORA Board was chosen he kindly consented to be a member of the publication committee, and thus added further correspondence to that entailed by his duties as secretary. He was very regular in his attendance at the meetings

of the editorial board and gave aid on the literary as well as the business side of the undertaking.

It sometimes happens that the functions of an official become inconspicuous from the very smoothness and efficiency with which they are performed. It was so with Mr. Rand. It is in retrospect that his services can best be appreciated. Twenty-five years is a long term in which to conduct the correspondence of a live organization, to prepare and send out its many notices, to take effective part in nearly all its deliberations, and to aid in the management of its publication. All this Mr. Rand did and did well.

There is another point to be remembered. Such associations as our own can prosper only when a fitting balance is maintained between scientific work and social interest, between research, exploration and scientific record on the one hand and popularization on the other. In preserving this balance, Mr. Rand's uniform tact, vigilant care and sound judgment have been factors of no small importance in the success of our Club.

He scarcely ever addressed the Club except briefly and on business matters.

Aside from his admirable Flora of Mt. Desert his botanical publications were few and of no great extent. In the *Mt. Desert Herald* he published in the summer of 1890 a series of eight articles of a popular nature on the vegetation of the island. To *Garden and Forest* he contributed three brief notes. In RHODORA he published ten short articles, mostly relating to stations for some of the rarer phanerogams in the outlying towns of the Boston District, but including a florula of the Duck Islands on the Maine coast and a list of addenda to his Flora of Mt. Desert.

He long cherished the hope of bringing out a revised and supplemented edition of his Flora and to that end he continued year after year his exploration of Mt. Desert and prepared many specimens. However, he was at length forced to abandon this enterprise, for he became conscious that there were limits beyond which it would be unwise to tax his eyesight, always under considerable strain in the course of his professional work, which involved the close scrutiny of old deeds and obscure probate records.

Mr. Rand gave his herbarium to the New England Botanical Club in 1914. There are portions of it still to be worked over and it is not yet possible to state the extent of the collection. Mr. Rand

himself estimated as far back as 1901 that it contained at least 15,000 sheets, but he subsequently made many additions. It is one of the most important gifts ever received by the Club and as a close record of a local flora covering the lower groups as well as the vascular plants, it is unsurpassed among the many valuable collections of which our Club herbarium has become the repository.

Mr. Rand had a very refined literary taste, was a copious and thoughtful reader and built up a library rich in the best fiction and history as well as in works bearing upon his favorite science.

He wrote letters without number and always in manuscript. He was never reconciled to what Henry James has termed the "inhuman legibility of the typewriter." His business notes had all needful definiteness combined with more human touches. His social correspondence had distinct charm. His messages of sympathy or congratulation were wonderfully expressive of warm feelings delicately worded.

On June 29, 1893, he married Miss Annie Matilda Crozier of Charlestown, a lady of great personal charm. While not herself botanically inclined she was sympathetic with his interest in plants and was a very delightful hostess to his many botanical guests.

Besides the New England Botanical Club there were several organizations to which Mr. Rand was faithfully devoted, namely a local Episcopalian Club, the Military Order of the Loyal Legion, and his dining club, the last—still in existence—being a noteworthy group of men with scholarly interests in the natural sciences.

On May 12, 1921, Mrs. Rand died—a blow from which her husband never recovered. In the autumn of the same year he was stricken down by paralysis. Thereafter, for three years, he led the life of an invalid, but so far recovered his powers that he could sit up, walk about the house, take short strolls in the garden, and even in the care of a nurse make longer journeys to the homes of friends. He was glad to see his friends and to the last retained his interest in the affairs and the members of the New England Botanical Club. At the end, which came October 9, 1924, his passing was mercifully sudden and he was spared conscious suffering.

Among the personal traits of his character which stand out most clearly in our memories of him were gentleness, patience, uniform courtesy, a refined literary interest, a whimsical humor, a cleverness in versification often exhibited at our Club dinners and celebrations.

It will be noted that these are qualities very rarely combined, as they were in his case, with exceptional powers of observation, a trained business judgment and firmness of decision, for his opinions had a fine definiteness and were in matters of importance tenaciously held.

Unflagging loyalty to an avocation, of a scientific and somewhat technical nature, taken up in youth and continued throughout life, is in itself a remarkable achievement. That his botanical activities gave great pleasure to our late friend there can be no doubt. They enriched his life and brought him into a host of human relations which he keenly enjoyed. In return for these pleasures, his services were liberally given and they were of an extent and nature to win for him the enduring gratitude of our Club and insure him an honorable place in the history of botany.

THE WHITE PINE IN MIDDLE TENNESSEE.

H. K. SVENSON.

IN August, 1922, Mr. W. C. Dickinson of Peabody College, Nashville, and the writer collected plants in the hills west of Nashville, and found on the summit of the high bluffs just south of the village of Craggie Hope, in Cheatham County, about a dozen full-grown specimens of *Pinus Strobus*. This station obviously extends the known distribution of the white pine some distance to the southwest. According to Sargent¹ the distribution of this tree is "Newfoundland to Manitoba, southward through the northern states to Pennsylvania, northern and eastern Ohio, northern Indiana, valley of the Rocky River near Oregon, Ogle County, Illinois, and central and southeastern Iowa, and along the Appalachian Mountains to Eastern Kentucky and Tennessee and northern Georgia." Gattinger² in his Flora of Tennessee reports it "from the Cumberland Mountains, and prominently [in] the Alleghenies along the slopes of the highest ridges." In the introduction, pp. 23-24, he makes the following observations: "There are neither pines nor firs the whole length of distance from Pulaski to Elizabethtown, near Louisville, Ky., nor are any to be found for a great distance east or west of this line (Nashville & Decatur Railroad). The scrub pine [*P. virginiana*] is the

¹ Sargent, C. S. *Man. Trees N. A.* ed. 2: 3-4. (1921.)

² Gattinger, A. *Fl. Tenn.* 31. (1901.)

only species I have ever observed in Middle Tennessee. I found it sparingly and confined to a limited belt of hills around the confluence of the Harpeth and Turnbull Rivers, in Dickson County." This is the very region where we found the white pines, which, from the gravels of Turnbull River, could be seen silhouetted against the sky at the summit of the almost inaccessible bluffs; whereas the more abundant scrub pines were found in the low-lying, sterile soils between the river and Craggie Hope. We also observed *Pinus virginiana* in the oak barrens toward White Bluffs, in Dickson County, a few miles to the northwest. However, the white pine must be of extremely limited occurrence in this region. An ascent of the bluffs showed that it grew rather sparsely on the rich well-drained slope at the summit of the bluffs, several of the mature trees, however, producing cones. Close to the bank of Turnbull River, shaded by the high cliffs, were *Waldsteinia fragarioides*, and *Equisetum hyemale* var. *intermedium*. These are reported by Gattinger only from the Alleghenies, and the entire locality has the appearance of a fragment of the northern Alleghenian forest, isolated in Middle Tennessee. Further exploration was prevented by darkness. Specimens of the plants are in the Gray Herbarium.

UNION COLLEGE, Schenectady.

THE NAME SISYMBRIUM.

K. K. MACKENZIE.

THE genus *Sisymbrium* was described by Linnaeus as follows in the 5th edition of the *Genera Plantarum*, p. 296, published in 1754:

"728. SISYMBRIUM. * *Tournef.* 109. *Radicula Dill. gen.* 6.

"CAL. *Perianthium* tetraphyllum: *foliolis* lanceolato-linearibus, patentiusculis, coloratis, deciduis.

"COR. tetrapetala, cruciformis. *Petala* oblonga, erecto-patentia, calyce saepius minora, unguibus minimis.

"STAM. *Filamenta* sex, calyce longiora: quorum *duo opposita* paulo breviora. *Antherae* simplices.

"PIST. *Germen* oblongum, filiforme. *Stylus* vix ullus. *Stigma* obtusum.

"PER. *Siliqua* longa, incurva, [gibba,] teres, bilocularis, bivalvis: *valvulis* dissepimento paulo brevioribus.

"SEM. plurima, parva.

"OBS. *Sophia corollam calyce breviorē gerit, & siliquam tenuissimam longissimam.*

"Radiculae D. *siliquam gibbam brevissimam proferunt* [uti 1. 2. 3.].

"*Calyx & Corolla in hoc genere patentia.*"

The bracketed words were not in the 1st edition published in 1737 or in the 3rd edition published in 1743 (see page 247). In those editions Linnaeus also had an immaterial observation about *Eruca* which he later omitted.

In the first edition of the *Species Plantarum* (pp. 657–660) published in 1753, the species of *Sisymbrium* listed by Linnaeus were (1) *Nasturium* [aquatic¹] um; (2) *sylvestre*; (3) *amphibium* α *palustre*, β *aquaticum*, δ *sylvestre*; (4) *supinum*; (5) *polyceratium*; (6) *murale*; (7) *vimineum*; (8) *arenosum*; (9) *monense*; (10) *asperum*; (11) *Sophia*; (12) *tanacetifolium*; (13) *altissimum*; (14) *Irio*; (15) *strictissimum*; (16) *integrifolium*.

In arriving at the proper use of the name *Sisymbrium* it is believed that the following points should be considered:

(1) In the *Genera Plantarum* Linnaeus gives references to Tournefort under a vast majority of the generic names proposed by him. These references are not to the descriptions of Tournefort, but to his plates. The plates are excellent and carefully prepared detail drawings. In other words, what Linnaeus did with most of his genera was to cite a definite excellent illustration showing exactly what he had in mind. Where he had any doubts whether the way in which Tournefort used a generic name in an illustration was the way in which he himself wished to use it he omitted the reference. For example, Tournefort (pl. 298) has a fine illustration of *Chaetochloa* as *Panicum*, but Linnaeus does not cite this at all.

In the case of *Sisymbrium* the Linnaean reference is to Tournefort's plate 109. This is an excellent detail illustration of the water cress, *Sisymbrium Nasturtium*.

(2) It will be noted that Linnaeus in his generic description says "*siliqua longa.*" He treated species with siliques "*longissima*" or "*brevissima*" as belonging to the genus *Sisymbrium*, but he self-evidently did not regard either as typical, because he made special observation about each.

¹ According to the custom of the period, Linnaeus here indicated "aquatic" by an equilateral triangle.

His generic description applies directly to the water cress, and not to such a species as *Sisymbrium altissimum*, which has very long pods.

(3) Special attention has been called to his language "Radiculae D. siliquam gibbam brevissimam proferunt, uti 1, 2, 3" and the argument has been advanced that as "1" evidently refers to the first species treated by him in *Species Plantarum* (namely the water cress) he by this language intended to indicate that this species was not typical. The following facts about this argument were not however noted by those who advanced the argument.

(a) The water cress does not have siliques which anyone would ever think of describing as "brevissimam."

(b) Dillenius, from whom the name *Radicula* is cited, treated the water cress as a *Sisymbrium* (Cat. Pl. Gus. 169). His illustration of *Radicula* (plate 6, opposite p. 124 l. c.) cited by Linnaeus is an excellent one of one of the plants we now call *Radicula*, and it has siliques which everyone would at once characterize as "brevissimam."

(c) Linnaeus turned out a great deal of work in a hurry and there are many typographical errors in some of his works. He complained of the "carelessness as to corrections" of his printers (Jackson's *Life of Linnaeus* p. 299); and I am very sure that the views of his printers concerning the manuscript he furnished them would have been most interesting if they had been preserved.

The first edition of the *Species Plantarum* and its companion volume, the fifth edition of the *Genera Plantarum*, show in various places unmistakable evidence of this haste. Some of the errors which crept in Linnaeus corrected in subsequent editions, and one of the errors so corrected by him deals with the very words we are now considering.

In other words, in the sixth edition of the *Genera Plantarum* (p. 338) published in 1764 Linnaeus changed these words to read "uti 4, 5"; and in its companion volume, the third edition of the *Species Plantarum*, we note (p. 916-7) that species 4 and 5 are species 2 and 3 of the first edition and that species 1 of both editions (the water cress) was omitted from the statement. In other words Linnaeus did not regard the water cress as one of the species to which his remarks about *Radicula* were applicable.

(4) Hill in the *British Herbal* (p. 245) published in 1756 seems to have been the first reviser of the Linnaean conception of *Sisym-*

brium. He confined the name *Sisymbrium* to the water cresses, saying, Linnaeus "very improperly joins with the water-cresses many plants not allied to them; these we shall give under other regular genera, and in their proper places." Accordingly he assigned some Linnaean species of *Sisymbrium* to *Radicula* (p. 264-5); species 11 (*Sophia*), species 14 (*Irio*) and species 15 (*strictissimum*) he assigned to *Erysimum* (p. 251). To the genus *Eruca* (p. 237) he assigned species 9 (*monense*) and 6 (*murale*).

(5) The next reviser was Adanson in 1763 (*Fam. Pl.* 2: 417). He also confined the name *Sisymbrium* to the water cresses, specifically citing Tournefort's plate 109; and he divided other Linnaean species of *Sisymbrium* among the genera *Kibera* Adans., *Roripa* Scop., *Sophia* Dod, and *Norta* Adans., assigning to these genera respectively the Linnaean species of *Sisymbrium* numbered 4, 3, 11 and 15 and in addition No. 10 to *Roripa*.

(6) The sixteen species given by Linnaeus are now referred to anywhere from nine to eleven different genera. *Radicula* and *Norta* (*Sisymbrium* of various authors) have practically the same number, the exact number depending on the disposition of certain species, which widely varies with different authors.

(7) The name *Sisymbrium* is a very old one. Some of the earlier botanists used it both for species of *Mentha* and for the water cress. Thus in Matthioli Commentarii x x Dioscorides (p. 292 Italian ed. of 1560; p. 487 ed. of 1565) we find an excellent illustration of the water cress as *Sisymbrium aquaticum*, while on pages 485-6 (last cited edition) we find equally excellent illustrations of two mints, one labeled *Sisymbrium hortense* and the other *Sisymbrium sylvestre*. The use of the name for the mints seems to have soon died out, but the use of the name for species of *Cruciferae* continued. The old authors had just as much trouble in applying names to species of *Cruciferae* as modern authors, and one can find various species assigned to the genus by different authors, but as far as I have seen all authors who used the name at all cited the water cress as one of the species of the genus.

Summing up, the plate of *Sisymbrium* cited by Linnaeus illustrates the water cress; his generic description best applies to the water cress of any of the species given by him; the historic name of the water cress is *Sisymbrium*; the first revisers of the Linnaean genus, Hill and Adanson, both separately and both very properly, restricted the

name *Sisymbrium* to the water cress and removed the other elements to other genera. Under these circumstances, under all codes of nomenclature the name *Sisymbrium* should now be applied to the water cress.

MAPLEWOOD, NEW JERSEY.

TWO NEW EPILOBIUMS OF EASTERN AMERICA.

M. L. FERNALD.

IN 1918 I described from the Magdalen Islands and Newfoundland *Epilobium densum* Raf., var. *nesophilum*.¹ At that time the plant was known only in flower and very young fruit. In August, 1924, however, Messrs. Bayard Long, Boyd Dunbar and I were so fortunate as to secure abundant fruiting as well as flowering material in Newfoundland and to collect the very characteristic stolons which had heretofore been inadequately known. The mature seed is quite unlike that of *E. densum* in having only a very short and scarcely obvious collar, the coma appearing to come directly from the summit of the seed; *E. densum* having a more defined neck. Var. *nesophilum*, furthermore, reproduces by filiform stolons which terminate in subglobose tubers, *E. densum* being non-stoloniferous. These, in addition to the characters originally pointed out: the subsimple to slightly branching habit, in contrast with the dense branching of *E. densum*; the commonly broader leaves; the calyx 4.5–7 mm. long, contrasted with the shorter calyx (3–4.3 mm. long) of *E. densum*; and the large petals (7.5–10 mm. long) contrasted with the small petals (4.2–6.5 mm. long); abundantly distinguish the Magdalen Island and Newfoundland plant from the continental *E. densum* and I now have no hesitation in treating it as

EPILOBIUM **nesophilum** (Fernald) n. comb. *E. densum*, var. *nesophilum* Fernald, RHODORA, xx. 29 (1918).

From *E. palustre*, *E. nesophilum* is quickly distinguished by the close cinereous puberulence of the foliage, the short pedicels, the erect buds with submucronate tips as in *E. densum* and the very large petals; and in large plants the prolonging inflorescences have a strikingly unilateral or scorpioid tendency which is not common in *E. palustre* and I have never seen in *E. densum*.

¹ Fernald, RHODORA, xx. 29 (1918).

In wet peaty or silicious soil in southern Newfoundland, found by us almost wherever we landed, from Trepassey near Cape Race to Port aux Basques near Cape Ray, occurs a little *Epilobium* obviously related to *E. palustre* and *E. nesophilum* in its simple or subsimple habit and slender terete stem, but differing from both in its short oblong or elliptical blunt leaves, oblong and obtuse calyx-segments, and especially in the remarkably prolonged neck of the seed; the seeds of both the other species having the neck exceedingly short and inconspicuous. In its tiny white or barely pink-tinged petals the little plant with long-necked seeds is like some of the varieties of *E. palustre*, especially vars. *labradoricum* Hausskn. and *mandjuricum* Hausskn. both of which occur in Newfoundland; but the seeds of both these varieties are like those of typical *E. palustre* in having merely a very short and scarcely perceptible neck; and the calyx-segments, like those of *E. palustre*, are lanceolate and acutish. The Newfoundland plant seems to be undescribed but it may be what Haussknecht referred to under *E. palustre*, var. *altaicum* Hausskn., an Altai plant with short, obtuse and dilated leaves and "minute" erect flowers, when he said: "Aehnliche Formen sammelte De La Pylaye in Neu-Fundland."¹ The seeds of var. *altaicum* are not described, but that the little plant of Newfoundland here discussed should not be placed under *E. palustre* seems reasonably clear. In view of its general occurrence in southern Newfoundland, where a century ago the remarkable student of the flora, Bachelot de la Pylaie did so much exploring, it seems appropriate to call the plant

EPILOBIUM (PALUSTRIFORMES) Pylaieanum, n. sp., planta pusilla ex rhizomate filiformi; sobolibus subcepgaieis filiformibus elongatis; caule simplici vel sparse ramoso gracile 0.3–1.7 dm. alto tereti minute piloso pilis arcuato-incurvis; foliis 5–10-jugis oblongis vel ellipticis obtusis vel apice rotundatis, mediis 0.8–2 cm. longis 2.5–5 mm. latis margine integris revolutis utrinque glabris vel sparse puberulis superne sub-lucidis; alabastris erectis apiculatis pilosiusculis; floribus parvis 3–5 mm. longis erectis; calycis laciniis oblongis obtusis; petalis albidis vel pallide lilacinis; capsulis 2–4.5 cm. longis junioribus pilis adpressis brevibus cinereo-pubescentibus; pedicellis 1–3.5 cm. longis; seminibus 2 mm. longis fusiformibus apice longe (0.2 mm.) in appendiculum attenuatis, testa papillis brevibus rotundatis dense obsita.

Plant small, from a filiform rhizome; the sobols mostly superficial, filiform, elongate: stem simple or sparingly branched, slender, 0.3–1.7 dm. high, terete, minutely pilose with incurving hairs; leaves 5–10

¹ Hausskn., Mon. Gatt. Epilob. 134 (1884).

pairs, oblong or elliptic, obtuse or rounded at apex, the median 0.8–2 cm. long, 2.5–5 mm. wide, with revolute margins, glabrous on both sides or sparingly puberulent, slightly lustrous above: buds erect, apiculate, minutely pilose: flowers 3–5 mm. long, erect: calyx-lobes oblong, obtuse: petals white or pale lilac: capsules 2–4.5 cm. long, the young cinereous with short appressed hairs: pedicels 1–3.5 cm. long: seeds 2 mm. long, fusiform, tapering to a slender collar 0.2 mm. long; the testa closely covered with rounded pebbling.—NEWFOUNDLAND: wet bog-barrens, Trepassey, August 16, 1924, *Fernald, Long & Dunbar*, no. 26,862; silicious gravelly slope, Harbour Breton, August 29, 1924, no. 26,863; granitic ledges, Ramea, August 30, 1924, no. 26,864; wet peaty barrens among the gneiss hills back of Port aux Basques, August 31, no. 26,865 (TYPE in Gray Herb.).

In its long-necked seeds and in its elliptic or oblong leaves *E. Pylaeanum* somewhat simulates *E. nutans* Schmidt of the mountains of central Europe, but the latter species has leafy basal offshoots and decumbent bases and its pink petals are much larger than those of the plant of southern Newfoundland.

GRAY HERBARIUM.

RECORDS OF *BIDENS FRONDOSA* VAR. *ANOMALA* PORTER.—This variety, characterized by its upwardly barbed awns, has been recorded by Fernald¹ from marshes along the lower Schuylkill and Delaware Rivers in Pennsylvania, New Jersey, and Delaware, from the mouth of the Androscoggin River in Maine, and from the vicinity of Halifax, Nova Scotia, and of St. Ann's, Cape Breton. Sherff² records it also from Kansas and Nebraska. Specimens collected by the writer in Massachusetts and in the District of Columbia fill in the gap in its northern range and also extend the limits of its known range somewhat to the southward.

On 4 Sept., 1924 I found a colony of half a dozen plants, all belonging to this variety, growing in shingle between houses at Nantasket Beach, Hull, Massachusetts. A specimen of this collection has been deposited in the herbarium of the New England Botanical Club.

In the vicinity of Washington, D. C., var. *anomala* is apparently not particularly rare along the Potomac River and the Chesapeake and Ohio Canal. On 14 Sept., 1921 I found a colony on the shore of

¹ RHODORA 15: 75. 1913.

² Bot. Gaz. 64: 34. 1917.

Analostan Island, Washington, D. C. In the fall of 1924, I gave special attention to the examination of the various species of *Bidens* for forms with upwardly barbed awns. *Bidens connata* var. *anomala* Farwell, the form of *connata* with upwardly barbed awns, already recorded from Washington by Sherff,¹ was found on several occasions, and three new localities for *B. frondosa* var. *anomala* were also discovered. A single plant of the latter form was collected from the river wall of the Potomac in East Potomac Park, and another at Fox Ferry, D. C., across the river from Alexandria. Both these localities might easily have been reached by seeds from the Analostan Island colony. A thriving colony was found on the banks of the Chesapeake and Ohio Canal, between Locks 10 and 12, near Cabin John, Maryland, growing with *B. connata* var. *anomala*. Specimens have been deposited in the Gray Herbarium and the National Herbarium.—S. F. BLAKE, Bureau of Plant Industry, Washington, D. C.

THE THIRD EDITION OF GROUT'S MOSSES WITH A HAND-LENS.—To the amateur and to the professional botanist whose chief interest lies in other groups of plants, the news that Grout's *Mosses with a Hand-Lens* has appeared in a new edition is very welcome. The work itself needs no introduction, for it has been widely used ever since the first edition appeared in 1900. The inclusion of hepatics in the second edition in 1905 made the work much more useful, since the novice frequently collects the leafy hepatics along with his mosses.

In the present edition² the introduction has been rewritten and expanded to three times its former length, making the work more available as an elementary text book of bryology as well as a flora for beginners. The treatment of the Sphagnaceae has been expanded from three to eight pages and that of the other mosses has been revised and four species added.

Dr. M. A. Howe has rewritten the treatment of the hepatics, making it more nearly equal and parallel to that of the mosses. The num-

¹ Bot. Gaz. **64**: 34. 1917. The record of *Bidens bidentoides* (Nutt.) Britton in the "Flora of the District of Columbia and vicinity," Contr. U. S. Nat. Herb. **21**: 289, 1919, is based on the Vasey specimen of *B. connata* var. *anomala* mentioned by Sherff, and on another specimen of the same variety collected near Cabin John, Md., by W. R. Maxon. Genuine *B. bidentoides* has not been found in the District of Columbia region.

² Grout, A. J., Mosses with a hand-lens, third edition, a popular guide to the common or conspicuous mosses and liverworts of the north-eastern United States. Liverworts by M. A. Howe, published by the author, 1 Vine St., New Brighton, Staten Island, New York City. xv + 339 p. [1924]. Price \$3.50.

ber of pages dealing with the former is more than double that of the earlier edition and thirty-four more species are described.

Perhaps the most striking change in the present edition is the addition of about one hundred illustrations. A large number of photographs, by the author and others, showing the habit and occasionally the habitat, have been added. These have been reproduced very well in half-tone and add much to the attractiveness of the work.—

CARROLL W. DODGE, Farlow Herbarium.

The date of the January issue (unpublished as this goes to press) will be announced later.

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